

NEW NORTH AMERICAN HOMOPTERA.—NO. VI.

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I. AMALOPOTA FITCHI, *n. sp.*

Closely allied to *A. Uhleri*. Smaller; elytra smoky, about twice banded with white; nervures carmine, ocelli apparently wanting. Length, 6 mm.

Male: Vertex shorter and broader posteriorly than in *Uhleri*, hind margin very feebly emarginate, apex of the pronotum not advanced beyond the base of the lateral keels; frontal keel, viewed from the side, broader and more strongly rounded, with a more conspicuous notch at the base of the clypeus than in *Uhleri*. Antennæ ligulate, slightly narrowed at base, the sides thickened and parallel beyond, setigerous notch deeper than in *Uhleri*. Eyes very feebly emarginate below. Pronotum, viewed from above, less acutely angled before and exhibiting a slightly thicker edge than in *Uhleri*, the expanded sides subquadrate with rounded angles. Rostrum only attaining the apex of the hind coxæ. Elytra similar in form to those of *Uhleri*, the neurulation nearly the same but with fewer apical areoles, these being ten in number from the tip of the clavus to the apex of the subcostal nervure; subapical areoles six, of which the first (outer) is large and oblong, the second small and triangular, and the third the longest; basal nervures four, long.

Colour pale yellowish-white, more obscure on the mesonotum and abdomen; sides of the face with a transverse carmine band between the base of the antennæ and the eye which is extended along the sides of the thorax where it becomes darker; abdomen sanguineous above, the genital segments brown. Eyes and tip of the rostrum black; antennæ reddish-brown, the thickened edges darker. Elytra blackish-fuscon; a basal elongated yellowish spot on the costa including the rounded elytral appendage; beyond this are two rounded dots, a broad transverse median band not touching the costa, and a large angular spot on the third and fourth subapical areoles sending a branch to the apex of the costa and another to the middle of the apical margin, whitish-hyaline; narrow costal area white with four brown spots, the stigmal deeper and crossed at apex by a heavy carmine veinlet; nervures carmine-red, heavier about the stigmal region, around the apex alternated with white; costa and a line on the commissure near the apex of the clavus, yellowish. Wings whitish-hyaline, with slender sanguineous nervures.

New York. Described from a single example beaten by me from a tree of the wild black cherry among the hills about twenty miles south of this city, on July 28th, 1892. This delicate little creature is a very interesting addition to our list of North American Derbidae. Though quite distinct it is closely allied to the *A. Uhleri*, described in 1889, from Western New York specimens. (See CAN. ENT., Sept., 1889). The characters of genus *Amalopota*, founded by me for the latter species, must be somewhat modified for the reception of *Fitchi*, as in this species the ocelli seem to be wanting, while in the *Uhleri* they are quite distinct, though small and but poorly defined. This genus, though certainly valid, is very near *Anotia*, and forms a connecting link between it and *Otiocerus*.

2. *CICADULA SLOSSONI*, *n. sp.*

Form and ornamentation of *C. variata* nearly, but much smaller, with the vertex shorter and the black markings more elaborate. Length, $2\frac{1}{2}$ to 3 mm.

Vertex $\frac{1}{4}$ longer on the middle than next the eye, blunter before and more rounded in both directions than in *variata*. Whole head much more deeply and coarsely punctured, the clypeus a little more narrowed apically, and the outer margins of the cheeks under the eyes shorter and more deeply excavated, with the outer angles more prominent than in *variata*. Pronotum distinctly transversely wrinkled, omitting the broad posterior margin which is closely punctured; in *variata* the pronotum is nearly smooth and more convex. Sides of the pronotum shorter, with the lateral angles more rounded and the latero-posterior edges more oblique than in *variata*. Last ventral segment of the female long, closely appressed over the base of the pygofer, the hind margin slightly waved, not distinctly notched on the middle as in *variata*. Valve of the male shorter than in *variata*, with the apical margin but feebly arquated; the plates longer and with their attenuated points longer and less recurved than in the larger species.

Colour: Head yellow; vertex with a large oval black spot on each side including a yellow dot and sending a branch anteriorly to the eye, apex with two large transverse black spots; about four broken arcs on the base of the front, a cloud beneath the eye, all the sutures of the face and the median line black, the latter expanded on the apex of the clypeus and the disc of the front. Antennæ dusky. Pronotum tinged with yellow anteriorly and marked with black along the fore border, and a double brown longitudinal median band widening on the hind margin.

Scutellum black, with the tip, the lateral margins anteriorly, and a median line reaching only to the transverse impressed line, yellow. Elytra white, dusky toward the apex, marked as in *variata*, with oblique brown bands forming a lozenge anteriorly, including a pale commissural spot, and an x posteriorly with the tip of the clavus as its centre, the median bands being common to both marks. These brown bands do not attain the costal margin, and are more strongly distinguished than in *variata*. Abdomen and pleural pieces deep black, the margin of the tergal pieces slenderly yellow, venter sometimes yellow with the segments and connexivum bordered within their margins with blackish. Legs brown, the joints and tibial spines pale.

New York; New Hampshire. Described from three examples; one male taken by me at Lancaster, N. Y., July 12th, 1889, a female taken at "High Bridge," New York City, in June, by Mr. E. B. Southwick, and a second female taken on the summit of Mt. Washington by Mrs. Annie Trumbull Slosson, to whom I take pleasure in dedicating this pretty little species as a slight tribute to her persevering devotion to the study of entomology.

3. CHLOROTETTIX NECOPINA, n. sp.

Form and size of *tergatus* nearly. Vertex with a black transverse band between the eyes. Colour above greenish-testaceous, marked and clouded with brown; elytra fuscous, with strong white nervures. Length, 7 mm.

Vertex a little more produced than in *tergatus*, and the front proportionately longer and narrower; ocelli contiguous to the eyes. Last ventral segment of the female thin, broadly and deeply cleft nearly to its base; this incisure at its apex armed with a small blunt tooth, the lateral lobes ovate, in one example feebly angled at apex. Pygofer stout, very slightly exceeded by the oviduct, and armed with a few stout brown bristles. Other characters about as in *tergatus*.

Colour: Beneath pale greenish tinged with testaceous, especially on the front, which is marked on the sides by about ten nearly obsolete brown arcs, and two brown dots are at the base of the clypeus; eyes dark brown edged with pale. Vertex with a broad transverse blackish band just behind the ocelli. Pronotum testaceous, pale before and on the median line, either side of which is a brown cloud, and a smaller one occupies the latero-posterior angle, transverse wrinkles less distinct than in *tergatus*. Scutellum marked with a piceous triangular spot within the

basal angles, the median line, a dot on either side, and the impressed line brown. Tergum fuscous, testaceous on the sides, the segment, edged with pale. Elytra fuscous-brown, nervures conspicuous, white, brown at apex. Wings smoky, iridescent, nervures brown. Legs pale testaceous, claws and tip of the rostrum piceous.

Mississippi. Described from two female examples kindly sent me by Mr. Howard Evarts Weed.

This very distinct species is quite anomalous in the genus in which I have placed it by its dark colouring and conspicuous markings, thus allying it with *Limotettix parallelus*. In most of its characters, however, it is closely related to *Chlorotettix tergatus*, near which it must be placed.

4. *ATHYSANUS EXTRUSUS*, n. sp.

Form of *A. variegatus*, Kirschb., broad and short; pale greyish-yellow, vertex with a transverse blackish band, elytral nervures pale. Length, $4\frac{1}{2}$ mm.

Vertex longer and more pointed than in *obsoletus*, nearly $\frac{1}{3}$ longer on the middle than next the eye; a broad transverse band on the disc and an angular spot at apex blackish, each bisected by the longitudinal median pale line. Face pale, front black with about eight pale arcs or pale with as many blackish arcs, sutures of the face and a double longitudinal line on the middle of the clypeus black; antennæ pale, set on a black cloud. Clypeus slightly narrowed to the truncated apex, its base arquated. Cheeks feebly angled without, exterior to the outer line of the loræ longitudinally wrinkled; tip of the rostrum black. Pronotum hardly longer than the vertex, mottled with dusky and showing four or five pale longitudinal lines, more or less obsolete; hind edge strongly concave, surface transversely wrinkled, broad anterior margin smooth and calloused; sides longer than in *obsoletus*, carinated; latero-posterior margins very oblique, almost continuous with the posterior margin. Scutelum with four or five brown spots, the posterior sometimes obsolete. Elytra short and broad, hardly exceeding the tip of the abdomen, pale, the areoles more or less heavily edged with fuscous. Abdomen brown or almost black, edge fulvous, with a few fulvous clouds beneath; pleural pieces brown, pale margined; legs pale, the femora banded with brown and the tibiæ dotted at the base of the spines. Valve of the male broad, triangular, apex obtuse; plates irregularly quadrangular, widely spreading, touching only at base; outer angles produced, subacute, armed with a few long bristles; inner angles rounded; styles very long, extending for

half their length beyond the apex of the plates, ligulate in form and curved downward and outward at apex; pygofer rounded at apex, almost equalling the plates, the small anal aperture placed superiorly.

New York; Connecticut. Described from three males. One taken at Portage Falls, N. Y., May 30th, 1888. The other two specimens were taken by me in Connecticut in the spring of 1883. One of these was swept from weeds and bushes on the hills about Northford, June 26th; the other, a very deeply coloured example, I found in a grove on Prospect St. in New Haven, June 4th. The long extruded styles of the males will at once distinguish this from any other of our described species of *Athysanus*.

5. *ATHYSANUS INSTABILIS*, *n. sp.*

More elongated than most of our species of this genus. Black, irrorated and finely marked with pale yellow. Elytra pale, the areoles edged with fuscous. Length, 4-4½ mm.

Head obtusely pointed before; vertex about ⅓ longer on the middle than next the eye, passage to the front well rounded, base with a few impunctured areas. Ocelli large, fulvous, distant from the eyes; temples broad; front convex, the sutures arquated at the antennæ and incurved at apex; clypeus feebly narrowed towards its slightly rounded apex; cheeks rather narrow, but feebly angled, not exceeding the clypeus. Pronotum rather long, with the sides long and carinated, latero-posterior edges straight, angles prominent, obtuse, surface strongly punctured or shagreened. Elytra long, with the appendix well developed. Valve of the male short, obtuse at apex; plates forming an equilateral triangle, fulvous clouded with dusky, their edges nearly straight, fringed with pale bristles. Last ventral segment of the female slightly produced and rounded on the middle, feebly arquated either side within the short subacute lateral angles; pygofer rather small, slightly exceeded by the oviduct.

Colour black. Base of the vertex, outer edge of the cheeks, and margins of the eyes slenderly yellow. Two transverse spots on the disc of the vertex near its base, two lines anterior to these, one or two dots near each eye, an angled slender line on the apex including a dot behind, a dot on the temples, about six arcs, a basal spot and a longitudinal line on the front, the latter expanded against the base of the clypeus, and

a spot on each lora, fulvous-yellow; disc of the cheeks with a pale cloud which sends a branch along the upper edge of the lora to the front. Antennæ black, base of the seta pale. Pronotum irrorate and narrowly edged with pale, with a few irregular yellowish marks along the anterior border. Middle line of the scutellum, a curved mark either side of this on the basal field and the margins yellow, the latter interrupted at their middle. Narrow edges of the abdominal segments and the spines of the pygofers pale. Femora with a fulvous band; hind tibiæ yellow, dotted with piceous, the spines and claws whitish. Elytra soiled white, smoky at tip, nervures concolorous broadly bordered with fuscous, the costal and commissural pale.

Michigan; Colorado. Described from one male and three female examples taken at Agricultural College, Michigan, by my friend Mr. G. C. Davis, and another female received from Prof. C. P. Gillette, taken in Colorado.

This insect is nearly allied to the species described by me as *Athysanus striatulus*, Fall. (?), in Ent. Am., vi., p. 134, like which it has a well-developed elytral appendix. Two of the specimens before me have a second transverse nervure between the first and second sectors of the elytra, thus allying them to *Deltocephalus*, but for the present it seems better to place them in genus *Athysanus*.

Our described North American species of *Athysanus* may be arranged as follows:—

A. Stout species with a short vertex and abbreviated elytra, without an appendix:—

1. *A. obsoletus*, Kirch.
2. *A. extrusus*, Van D.
3. *A. comma*, Van D.
4. *A. plutonius*, Uhler.

B. Smaller, more elongated species, with more produced subconical heads and longer elytra without an appendix:—

5. *A. Curtisii*, Fitch.
6. *A. bicolor*, Van D.
7. *A. obtutus*, Van D.

C. Species similar in form to those of the last section, but with a shorter head, flatter vertex, and longer elytra with a well-developed appendix:—

8. *A. instabilis*, Van D.
9. *A. striatulus*, Fall. (?).